

Amendment to the Claims

The following listing of claims will replace all prior versions and listings of claims in the application:

1-46. (canceled)

47. (Currently amended) A method of inducing an immune response against an infection caused by *Neisseria meningitidis* or *Neisseria gonorrhoeae* bacteria in a human in need thereof, comprising administering to the human an effective amount of a recombinant protein ~~having consisting of~~ the amino acid sequence ~~consisting of~~ set forth in SEQ ID NO.: 4.
48. (Currently amended) A method of inducing an immune response against an infection caused by *Neisseria meningitidis* or *Neisseria gonorrhoeae* bacteria in a human in need thereof, comprising administering to the human an effective amount of a pharmaceutical composition comprising a recombinant protein and a pharmaceutically acceptable carrier, wherein the protein ~~has consists of~~ the amino acid sequence ~~consisting of~~ set forth in SEQ ID NO: 4.
49. (Previously presented) The method according to claim 47, further comprising a step of administering to the human a polysaccharide antigen.
50. (Previously presented) The method according to claim 48, wherein the pharmaceutical composition further comprises a polysaccharide antigen.
51. (Previously presented) The method according to claim 50, wherein the polysaccharide antigen is a capsular polysaccharide of *Neisseria meningitidis*.
52. (Canceled)
53. (Previously presented) The method according to claim 48, wherein the pharmaceutical composition further comprises a peptide antigen.
54. (Previously presented) The method according to claim 48, wherein the pharmaceutical composition is administered parenterally.

55. (Previously presented) The method according to claim 48, wherein the pharmaceutical composition is administered mucosally.
56. (Previously presented) The method according to claim 55, wherein the pharmaceutical composition is administered orally.
57. (Currently amended) A method of inducing an immune response against an infection caused by *Neisseria meningitidis* or *Neisseria gonorrhoeae* bacteria in a human in need thereof, comprising administering to the human an effective amount of a recombinant fusion protein, wherein the fusion protein ~~comprises~~ consists of the first 47 amino acids of the N-terminus of P64k protein from *Neisseria meningitidis* and the amino acid sequence consisting of set forth in SEQ ID NO.: 4.